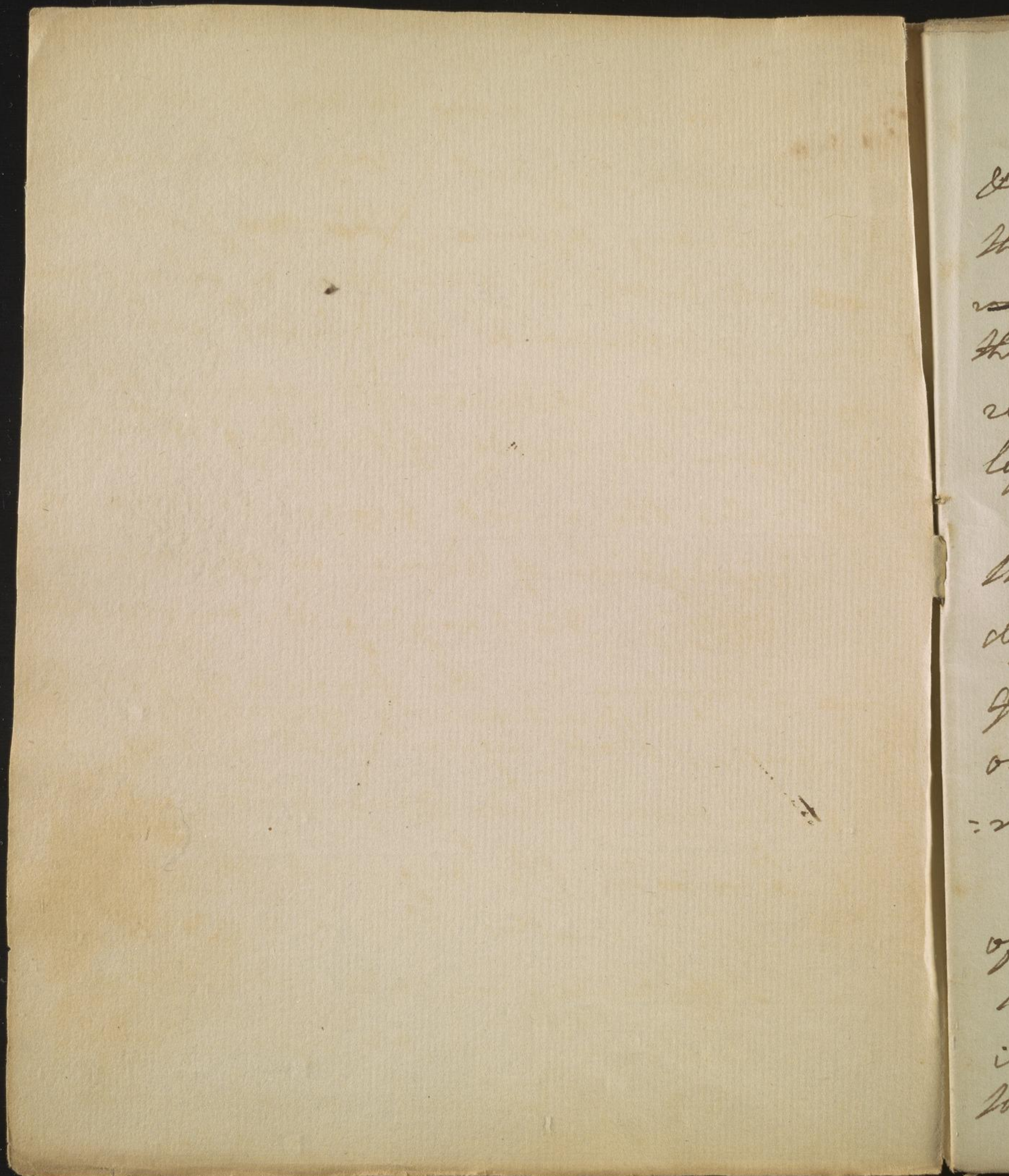


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of the Diseases & Disorders of the  
Urinary Organs continued.







we come now to an important  
& difficult Subject - viz: the Diseases of  
the urinary organs. ~~But~~ <sup>now</sup> I shall  
~~not~~ attempt to give you a theory <sup>of</sup>  
them, and afterwards lay before you the  
result of the experience & reading of my  
life upon the mode of treating them.

As the most frequent cause of  
the Suppression of Urine, or of pain &  
difficulty in discharging it, arises from  
<sup>sand</sup> ~~of~~ Calculus in the forms of Gravel,  
in the different primary organs,  
or stones I shall begin with a few re-  
marks upon this generation.

1. ~~There is~~ In the original composition  
of animal matter there is a portion of  
that substance we call Calculus. It  
is the predominance or separation of  
this substance which constitutes it.



was ascribed to their scanty diet. This  
fact suggests an important remedy for  
Obstructions of all kinds in every part  
of the body, and that is Abstinence <sup>from</sup>  
-Dining upon famine. The I ~~have~~ <sup>propose</sup> said  
the the lymphatics in our physiology  
to Swine which feed upon the filth of  
our streets. ~~The~~ I have said that the  
Lymphatics become hungry in famine.  
- ~~By more Abstinence it is they we~~  
see this in Dropsies, & in fevers in w:  
they absorb water & fat. By the same  
means - may they not be let loose  
upon <sup>all</sup> other matters in the body that are  
redundant in quantity or of an offensive  
quality? I have often seen tumors,  
subside & disappear ~~of~~ During a Chronic  
fever. Even Bubo has thus <sup>been</sup> over ==



12

called the Calculous Diathesis.

2 This diathesis prevails throughout nearly every part of animated nature not only <sup>in</sup> the human species, but <sup>among</sup> horses, cattle, sheep, hogs - dogs - cats & many other animals. They suffer less from ~~these~~ <sup>calculi</sup> than men when they exist in their bladders from the horizontal posture of <sup>the</sup> bodies. I once saw a stone <sup>that</sup> weighed ~~was~~ as large as a  $\frac{1}{2}$  lb. cut out of the bladder of a mare 18 years old, that was diseased from it but three days before she died, & I have heard of a stone of  $\frac{1}{2}$  22 & penny w<sup>t</sup> taken from a horse that was diseased but one night before his death.

3 Some nations are more affected with Calculus than others, - it is most common in Britain - Holland & France. It is a rare complaint in Switzerland - Saxony Japan & India. Haller.



+ money's part of a British Officer.

& more than running water. Bruce says it is unknown near the Nile, but very common at a distance from it, where the inhabitants drink well water.

= from our light. In ~~an~~ advising for  
Abstinence for the removal of Obstructions,  
it will be necessary only to abstract nour-  
ishment from the body. The ~~of~~ tone  
of the stomach & bowels & nervous system  
may still be kept up by good a little  
~~solid~~ <sup>subtle</sup> aliment, & by tonic medicines. The  
Lymphatics are too weak & ~~to~~ <sup>to</sup> hunt their appetites by  
~~feeding~~ <sup>feeding</sup> upon either themselves ~~or~~



Some waters are more disposed to  
 produce it than others - Those which deposit  
 the most earth are most disposed to  
 produce it. To this ~~Dr. Haller~~ <sup>there are two</sup> ~~exceptions~~ <sup>the</sup>  
~~Dr. Haller says for~~ <sup>at Göttingen</sup> ~~the water~~ <sup>and</sup>  
~~is very apt to deposit~~ <sup>in either of those places as a disease.</sup>  
~~Calculus is rarely known~~ <sup>there</sup>  
~~The same thing occurs in Göttingen~~ <sup>in S. Carolina</sup>  
~~as a disease. The ill effects of it~~ <sup>are pro-</sup>  
~~ably obviated by the heat of climate~~  
~~which acts in preventing it~~ <sup>as it does the</sup>  
~~It is hardly known in~~ <sup>some countries.</sup>  
 Gout. by well water certainly produces it

Calculus appears not only in the  
 kidneys, but in the bladder, but in  
 the viscera, especially the lungs - ~~the~~ <sup>the uterus - prostate gland -</sup>  
 joints - the bones - the arteries, ~~but~~ <sup>in</sup>  
 the teeth - in the blood - in the tears - in  
 the saliva - in the wax of the ears, in  
 the semen, & even in the discharges by the  
 pores of the skin.



7 V It is a more common disease in  
early than in middle life, or in old  
age. Out of about 1600 ~~pa~~ patients  
that were admitted into the hospital  
a lunatic, 558 of them were between  
6 & 10 years of age. The greatest number  
were but 6 years old viz: 147.

+ 9 It is an hereditary disease. I assisted Dr  
Physick in cutting a young man for the stone  
Wm Brown - whose grandfather - granduncle &  
uncle had all been afflicted with gravel or  
stone. His father lately.



14

Women are less subject to calculus  
in the bladder, than men from the  
more easy passage of ~~from~~ the nuclei  
which produce it out of the bladder  
thru their shorter urethra. from back

~~who~~  
~~the bladder and old people are~~

Some drinks are said to produce it more  
than others. Malt liquors have been  
blamed for this purpose - But Dr Haller  
denies it, and says out of nearly 300  
bodies of Beer drinkers which he dissected

he found ~~but~~ <sup>only</sup> ~~two~~ <sup>two</sup> of  
~~them~~ <sup>who</sup> ~~produced it~~ <sup>produced it</sup>  
~~by drinking~~ <sup>by drinking</sup> ~~drinks~~ <sup>drinks</sup> ~~which~~ <sup>which</sup> ~~above~~ <sup>above</sup> ~~with an~~ <sup>with an</sup>  
~~acid~~ <sup>acid</sup> ~~in~~ <sup>in</sup> ~~being~~ <sup>being</sup> ~~more~~ <sup>more</sup> ~~easily~~ <sup>easily</sup> ~~evolved~~ <sup>evolved</sup>  
~~from the~~ <sup>from the</sup> ~~acid~~ <sup>acid</sup> ~~in~~ <sup>in</sup> ~~being~~ <sup>being</sup> ~~more~~ <sup>more</sup> ~~easily~~ <sup>easily</sup> ~~evolved~~ <sup>evolved</sup>  
~~from the~~ <sup>from the</sup> ~~acid~~ <sup>acid</sup> ~~in~~ <sup>in</sup> ~~being~~ <sup>being</sup> ~~more~~ <sup>more</sup> ~~easily~~ <sup>easily</sup> ~~evolved~~ <sup>evolved</sup>

It appears first in the kidneys & bladder  
than in malt liquors of a strong body. +  
It is ~~recumbent~~ <sup>recumbent</sup> ~~but~~ <sup>but</sup> ~~not~~ <sup>not</sup> ~~here~~ <sup>here</sup> ~~especially~~ <sup>especially</sup> ~~on~~ <sup>on</sup>

the back tends to produce this dis-  
Having thus mentioned its predisposing



no. 30. 1774

✓ I do not say a Culiculus cannot be  
formed without a nucleus. I believe it  
may, but it is most frequently produced  
from one, and when formed -



~~causes, I shall now enumerate its~~  
 The ~~remote~~ <sup>of this disease</sup> causes, ~~these are~~  
 1 particles of the blood - such as <sup>its</sup> Lymph,  
 or red particles 2 pus 3 mucus & tumors  
 or extraneous matters in the bladder.  
 5 and an abrasion of the mucus of the  
bladder. The ~~These~~ former <sup>are at most</sup> ~~are the most~~  
 frequently. ~~They~~ They are excited by violent  
 exercise especially hard riding, & contusions  
 upon the region of the kidneys. <sup>across</sup> ~~best~~ ~~more~~  
 fever which affects the kidneys sometimes  
 promotes the effusion of the above <sup>substances</sup> ~~mucus~~.  
 - ~~standing long~~ standing long by wearing  
 the kidneys disposed to these effusions,  
 and hence the nobility who serve the  
 former  
 kings of Spain by standing many hours  
 in his presence, are often affected by  
 Calculus.

~~The nucleus or basis of Calculus~~



leather  
+ Sir Isaac's Chair was eroded by the  
assimilation of his urine which distilled upon  
it without his being able to prevent it. It  
was a very common disease in the 17th Century (a)

+ Dr. Astruc a Shinnies prostate gland to  
retaining urine in the struts of London - when  
he grew old, - had been coming on 6 years.

V Vanowickers relates the case of a  
man who lay on his back for  
a few weeks in consequence of break-  
-ing his thigh, had a stone formed  
in his kidneys.

(a) In England - <sup>a period of the greatest</sup> ~~particularly among~~  
<sup>intellectual</sup> ~~the clergy~~ and moral glory of that  
country. In reading the lives of the 22,000  
ejected ministers in the Reign of Charles II. it  
appears <sup>that</sup> ~~that~~ <sup>1/3</sup> of them were afflicted =



15

~~being thus~~ formed, a stoney matter is  
deposited upon it either in the kidneys or  
Bladder. This disposition is hastened, &  
made more certain, by the following  
circumstances.

1 The long retention of the Urine after  
the bladder is full. Dr Franklin owed  
his Stone to this cause. Judges, Clergymen  
Schoolmasters & studious men <sup>who</sup> ~~are~~  
forget to discharge y<sup>e</sup> Urine, or who do  
not feel its <sup>stimulus</sup> from the predominance of  
mental stimulus, are often afflicted with  
gravel & stone. Sir Isaac Newton & Dr Lane  
died with it. Old men in part from <sup>indisposition</sup> ~~indolence~~  
<sup>to make water</sup> ~~perhaps~~ owe y<sup>e</sup> Stone to this cause.

2 Lying long on the Back. Rhenish gouty  
people are so subject to the stone. The  
tendency of gouty action to the kidneys  
favours the effusion of its mucki, as  
well as disposes to Calculous Concretion.



— with gravel or stone induced by their sedantary  
and studious lives. —



17  
Old people, & children ~~are not~~ <sup>probably</sup> one  
the ~~same~~ <sup>latter</sup> to the same canoe, The ~~former~~  
lie chiefly on their backs. It appears  
in them <sup>even</sup> under a year old - one case  
is related of its being congenial.

3 The partial, or imperfect discharge  
of the Urine in a lying posture - whereby  
a quantity of the Urine is left behind,  
and thus by becoming more <sup>disorganised,</sup> ~~acid~~  
deposits its stony matter upon a mem-  
-brane if any exist in the bladder. Old  
Mr Fisher's case of Virginia. The imperfect  
discharge of the Urine in <sup>in an upright posture</sup> old people from  
the weakness of the Accelerators Urine,  
probably ~~be~~ produces the same effect. -  
Gravel ~~the~~ <sup>or</sup> Stone thus formed produces diff:  
Symptoms as it appears in the kidneys,  
Ureters - or Bladder.

In the kidneys - pain on one or both



(a) To this symptom there are sometimes exceptions. The itching is sometimes induced by diseases of <sup>the</sup> neck of the bladder and even of the Rectum as well in 1808 as by ~~gross~~ a stone.

✓ I prescribed for a ~~woman~~ lady last summer ~~who~~ with this disease who told me her mother had had been afflicted it, & that such was the acuteness of ~~the~~ <sup>the</sup> ~~symptom~~ in a fit of it, that ~~the~~ <sup>the most exquisite</sup> ~~pain~~ <sup>pain</sup> was excited only by a person walking gently across the floor of her bed room.

+ ~~That~~ A disease that is a Stricture of the prostate gland sometimes Counterfeits the presence of a stone in the bladder. It is known 1 by pain in discharging 2 the absence of bloody urine. 3 no ~~enlargement~~ <sup>enlargement</sup> of the gland 4 ~~and~~ <sup>and</sup> general bad health. To each of these signs there are occasional exceptions. as riding from or ~~gone~~ <sup>gone</sup>.



18  
sides of the lumbar region - sickness, or  
~~stomach~~ vomiting - Colic - a pain along  
the thigh - & a retraction of the testicle in males  
a suppression - or a small  
on the side of the affected kidney -  
discharge of turbid - high coloured, or bloody

Urine - or of a large quantity of pale  
Urine. There are cases however in which it produces  
no pain; but a constant sickness or vomiting.

In the ~~the~~ Ureters - it produces nearly  
the same symptoms, but with <sup>more</sup> ~~very~~  
- exquisite pain.

In the Bladder, it produces a frequent  
desire to make water - Urine mixed w:  
<sup>more than blood -</sup> mucus, & itching of the <sup>glans (a)</sup> penis. - When  
the stones are small they are sometimes  
discharged, with great pain, - When large,  
they bring on Ulcers - Schismus - ~~or~~ Bunner -  
- Cancer - Death. +

The pain from gravel & stone is preeminent  
over all other pain in intensity. The whole  
system for agonizes in it. ✓

[Many experiments have been



*[Faint, illegible handwriting on a blank page, likely bleed-through from the reverse side.]*

*[Faint, illegible handwriting on the right edge of the page, likely bleed-through from the reverse side.]*



I made to ascertain the nature of the stone.  
 I shall read to you the result of Dr Black's  
 inquiries ~~taken~~ upon this subject. ~~taken~~  
~~from his mathematics~~ "The matter of ~~Calculus~~  
 Calculus, has been considered by some as  
 similar to gypseous bodies. - Others have  
 compared ~~them~~ <sup>it</sup> to the ~~crystalline~~ <sup>calcareous</sup> ~~water~~  
 Incretations which some mineral ~~bod~~  
 leave upon vegetables, and other bodies. Others  
 have supposed the Calculus a sort of Tartar  
 from wine. But it is a substance totally  
 different from <sup>all</sup> these. It is not soluble  
 in air, nor water, like Tartar, and as  
 it dissolves in the caustic alkali, it is diff-  
 erent from the calcareous earths or Gyp-  
 sum, neither of which can be dissolved  
 in this substance. It effervesces with  
 the vitrous acid, but it is not attended w:  
 a loss of weight. <sup>This effervescence</sup> It proceeds from an  
 inflamm<sup>ble</sup> matter present, and is



[# They have been divided into such as are composed of Mineral & those of Ammonia. These are soluble in a solution of fixed alkaline salts. 2 Phosphates of lime - 2<sup>o</sup> of magnesia & 2<sup>o</sup> of ammonia. These may be fused by a blow pipe & dissolved in muriatic acid.

3 Oxalate of lime. These are insoluble in Alkalies, but liquify slowly in muriatic acid. I see below 4 Phosphates of lime. These are soluble in mur. acid.

[V Dr Black's Acc<sup>t</sup> of human Calculus. <sup>part</sup> - tending in not containing any of the Carbonic Acid. # see above.

Of the specific gravity of ~~various~~ <sup>human</sup> Calculi varies according to Linnæus from 1213, to 1976. Some late experiments ~~show these to consist~~ <sup>appear to consist</sup> the different kinds afford. 1 this acid. 2 the phosphate of ammonia. 3 the phosphate of lime - of magnesia and ammonia - 4 the oxalate of lime - 5 carbonate of lime. 6 filix, & materia animalis. Their O<sup>r</sup>

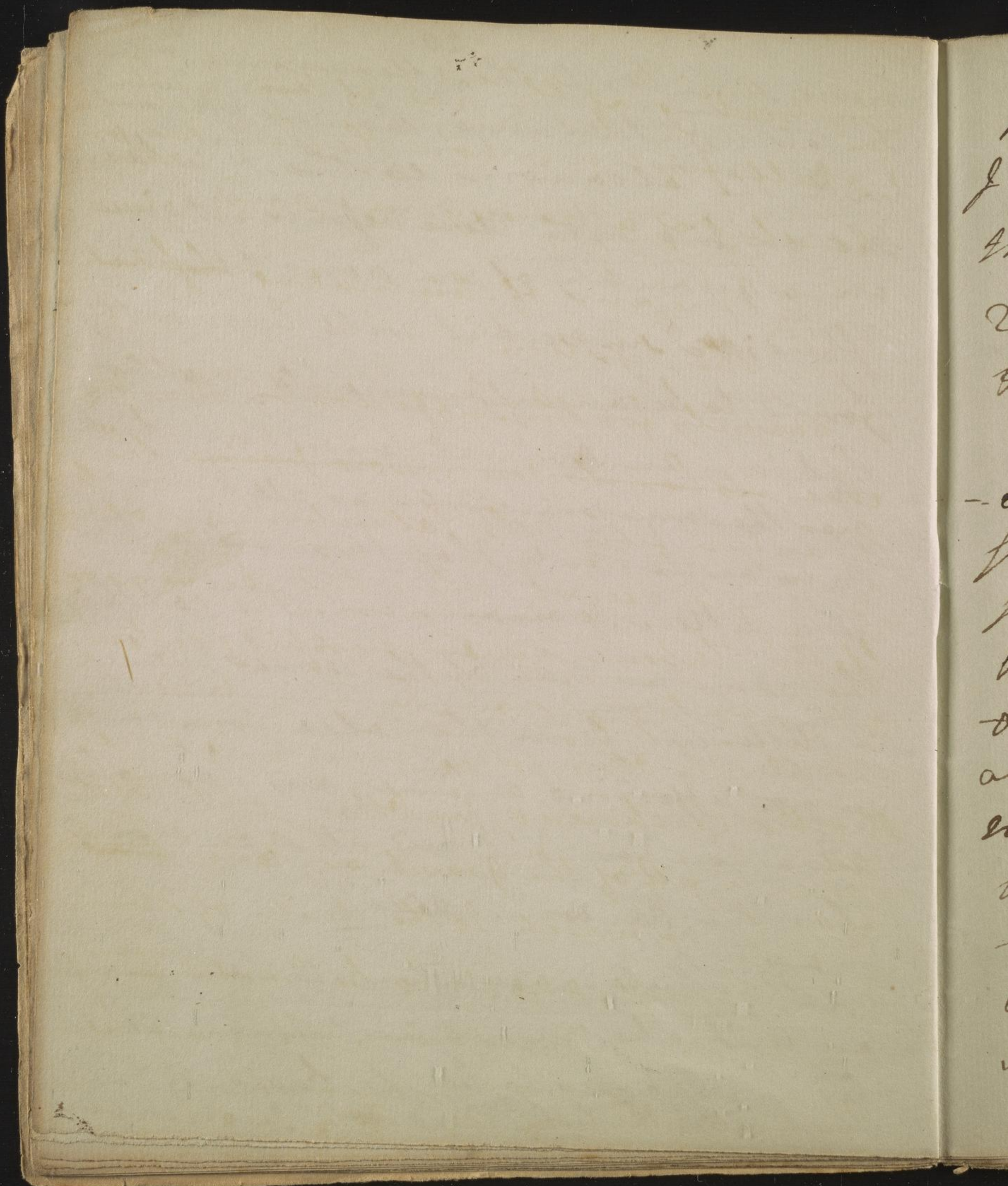
[I. 5<sup>th</sup> lime 45 parts. Carbonic Acid 37. Animal matter & water 18 parts, making in all 100. These are soluble in muriatic acid. -



more similar to the effervescence of Metals with that Acid, than its effervescence with the Calcareous earths, & when set on fire with close vessels, it gives out a quantity of an aerial elastic fluid; ~~the~~ I suspect it will be mostly found to be an inflammable matter; that is - an Animal Concretion which has the same principles as all Animal Substances, only that these are united in a different manner. The earth is the same as that of the Bones, which is different from the Calcareous earth, in not affording a lime, and having less attraction for Acid, and little or none for the Carbonic Acid." ]

[Mr Shule's experiments have discovered our Acid to be present in human Calculus, <sup>where</sup> he supposes to be its basis. It has been called the lithic Acid & Dr Jacobs confirms



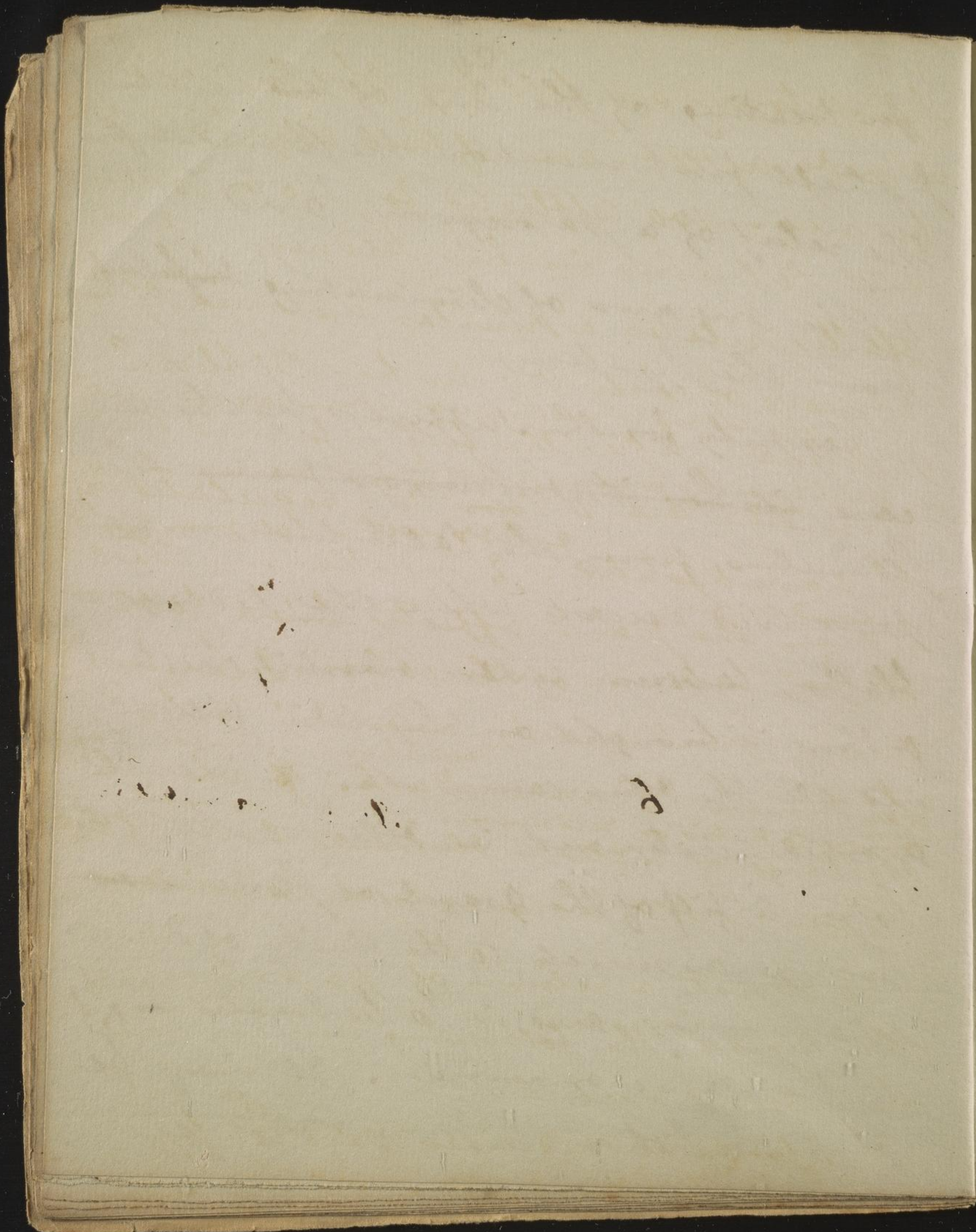




In treating of the cure of ~~this~~ Calculus,  
I shall first mention the Remedies for  
the relief of a paroxysm, and  
2<sup>ly</sup> The means of eliminating ~~the~~ Calculi  
from the System.

Happily for the Sufferers by this dis-  
~~ease its~~ ~~its~~ ~~process~~ ~~passes~~ the  
Stimulus from the Calculus is not  
perceived except when the kidneys or  
~~bladder~~ <sup>urinary</sup> labour under morbid excitement.  
& this is brought on by cold, fatigue,  
and all the other causes which induce  
morbid excitement in other parts of the  
body. A fit of the Gravel or Stone is  
belonged as much to the Urinary of disease  
as a pleurisy, and is to be treated <sup>nearly</sup> in  
in the same manner. It may be  
obviated when its presomitory





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Symptoms are felt by V. By this remedy a Mr Lane of this city lived to be near 100 afflicted for 40 or 50 years with Calculus in his kidneys. Dr. Haller relates a similar instance of the efficacy of early V. in his Bibliotheca Medica. I have used it with great advantage in a great many cases. After the fist is formed the remedies are 1 Copious V. regulated by the pain & pulse. 2 Osmitt - Col. Martin discharged and act on the part affected like a bath thro' the medium of the Colon. 3 Enemata - particularly Castor Oil. 4 Lig. demulcent drinks. 5 Warm Bath. 6 When the Union to pubis or perineum. This is most useful in discharge of water is obstructed from the bladder, it should be drawn off by a catheter.

To obviate a return of paroxysms of this disease, the following remedies have been found useful.

1 Certain medicines said to be



+ Lord Walpole took ℥i of Soap & ℥ij of lime water for 8 years and was relieved by them of the stone. His health was improved by the habitual use of these remedies. It is remarkable a Calculus is more ~~diff~~ soluble out of the body in the Urine of a person who has been using lime water than in common Urine.

✓ ~~is~~ a purveyor of the gravel. By thus obviating debility and disease, the kidneys & bladder after a while lose their sensibility to the stimulus of gravel, and stone, and hence many persons carry Calculus through life in their kidneys & bladder ~~not~~ without pain, or any other sign of disease. = 1a1



23

Antilithic, such as the Caustic alkali, the  
water impregnated with Carbonic acid gas, the  
Citric acid, Lime water & Soap - also certain  
vegetable matters particularly the Uva Ursi,  
and the wild carrot seed tea<sup>+</sup>. These substances  
have been supposed to dissolve the stone in  
the Urinary Organs, but on any dissection  
soundings prove this not to be the case. The  
experiments of D. Lemphier prove that the Calculus  
is but little changed out of the body by any of the  
above substances in a simple state, and not  
at all when ~~even~~ diluted with Urine. The  
Alkaline salt, Lime water & Soap act by neutral-  
izing the Acid of the stomach, & thus  
perhaps prevent the increase of Calculus. The  
Acids and ~~best~~ Uva Ursi act as tonics, and  
thus obviate the debility which invites to mor-  
bid excitement, or that pain, sickness and  
fever which constitute V



